Making Monetary Policy by Committee

by

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I was Vice Chairman of the Federal Reserve Board while I was preparing my Marshall Lectures for delivery at Cambridge in 1995. So I asked the Board staff to research what had been written about making monetary policy by committees—as opposed to by individuals. Although they were (and remain) a knowledgeable and thorough bunch, they unearthed almost nothing. So when I delivered the Robbins Lectures at the London School of Economics the following year,[1] this is what I concluded on the subject:

> My own hunch is that, on balance, the additional monetary policy inertia imparted by group decisionmaking provides a net benefit to society… But my main point is simpler: My experience as a member of the FOMC left me with a strong feeling that the theoretical fiction that monetary policy is made by a single individual maximizing a well-defined preference function misses something important. In my view, monetary theorists should start paying some attention to the nature of decisionmaking by committee, which is rarely mentioned in the academic literature. (Blinder (1998), p. 22)

I made reference in that lecture to only one paper on the subject, Faust's (1996) clever model of the seemingly-odd construction of the FOMC, though I should have cited Waller's (1992) earlier work as well. (*Mea culpa*.) My point is that, up to then, there had been hardly any research on committee decisionmaking.

Fortunately, that is no longer the case. By the time of my three Okun lectures at Yale in 2002 (Blinder (2004)), the subject merited a whole lecture, including references to about ten papers on the subject—and I missed some. (*Mea culpa* again.) The literature has continued to grow since then, including seven papers at a Netherlands Central Bank conference in 2005 and eleven papers at a Bank of Norway conference last year. The study of central banking by committee thus appears to be a growth industry, albeit a small one.

[1] These were eventually published as Blinder (1998).

In this paper, I try to take stock of what we *think* we know—and what we do not know—about several questions that have been asked in this still-very-young literature. I also pose a few new questions. My jumping off point is two facts.

1. The data show an unmistakable trend toward more and more central banks making monetary policy decisions by committees rather than by single individuals (Blinder (2004), Chapter 2), which suggests that committee decisions are, for some reason(s), perceived to be superior.
2. Monetary policy committees (MPCs) come in a wide variety of shapes and sizes, suggesting either that the principal determinants of optimal committee design have yet to be pinned down, or that some of these determinants vary across nations--probably both.

Regarding Fact 1, the choices made by a number of countries in the last 15 years or so indicate an evolving consensus that (a) the committee-versus-individual choice matters for monetary policy and (b) committees make superior decisions, on average. But Fact 2 reveals that there is as yet no consensus on a host of important design issues. So I begin with Fact 1 but concentrate on Fact 2.

1. Are committee decisions different? Better?

Do the decisions of monetary policy committees differ systematically from those of individual central bankers? Notice that my opening quotation strongly suggested that they do and that, in particular, committee-based decisions are more *consensual* and more *inertial* and, for those reasons, possibly *better*. But is it true?

Subsequent experimental research by John Morgan and me (Blinder and Morgan, 2005, 2007) has been kinder to the last part of this presumption than to the first. In two different experiments, one with 100 Princeton University students and the other with 252 University of California, Berkeley students, we found clear evidence that committees (which were of sizes 4, 5, and 8 in the experiments) outperform individual decisionmakers in making simulated monetary policy. Lombardelli *et al*. (2005) found the same in a near-replication of our work using students at the London School of Economics.

However, contrary to my 1996 suggestion, committees do not appear to acquire their edge by being more inertial. In fact, the most stunning finding of Blinder and Morgan (2005), which was subsequently replicated in Blinder and Morgan (2007), is that committees *do not* react more slowly (nor more quickly) to demand shocks than individuals do. Instead, they perform better because they make fewer mistakes—without taking longer to reach decisions.[2] One strong suggestion emerging from the experimental results is that there are genuine gains from group interactions. Committees do not just reflect the average opinions of their member. They do not simply follow the median voter rule. And they are not dominated by their most skilled members.[3] Instead, the group seems to generate some sort of collective wisdom that makes the whole somewhat greater than the sum of its parts.

Anne Sibert (2006) recently disputed this conclusion, at least conceptually. She suggested two reasons why committees in general, and MPCs in particular, might

[2] "Longer" in this context refers to how much *data* the decisionmaker requires before changing interest rates, not to the number of minutes of *clock time* that elapse in the experiment. We judged this to be the more relevant concept of time lag in the monetary policy context. Who really cares how many minutes the MPC meeting lasts?

[3] These are three findings from Blinder and Morgan (2005).

perform less well than individual decisionmakers. One is free-riding on the public-goods nature of macroeconomic information, which is related to what psychologists call "social loafing"—letting someone else do the work. The other is what is commonly called "group-think," the psychological drive for consensus.

Doubtless, there are many applications in which social loafing on a committee is important. Just think of the work of most faculty committees. But, in my view, it strains credulity to apply this idea to serving on a monetary policy committee. After all, that is typically the most important duty that each committee member has in his or her professional life. Rather than fostering social loafing, life on a MPC seems more likely to foster an atmosphere of competition and one-upmanship. In my personal experience on the FOMC, members (most of whom had large staffs) prepared assiduously for each meeting in order to make the most telling points and thereby, hopefully, to influence the opinions of other committee members—or, failing that, at least to sound well-informed and smart.

Group-think is less easily dismissed. Sibert (2006) quotes disapprovingly my hunches that committees "laboriously aggregate individual preferences; that they need to be led; that they tend to adopt compromise positions on difficult questions" (Blinder (1998), p. 20)—all of which suggest that committees moderate the possibly-extreme views of individual members. Instead, she observes, group-think can sometimes lead committees to adopt decisions that no one would call moderate—as numerous military and foreign-policy misadventures attest.

There is certainly evidence for group-think outside the realm of economics (*cf.* Janis (1982)). And there may even be examples of group-think in monetary policy. Alan

Greenspan (but not Ben Bernanke) certainly encouraged it on the FOMC; and some of us have a hard time believing that all 21 members of the ECB Governing Council *always* independently come to the same conclusion on *everything*. But, that said, I have a hard time thinking of examples in which group-think led a central bank to pursue horrendous monetary policy.[4] So I am not persuaded that we should let Sibert's *a priori* arguments trump the experimental evidence to the contrary—not to mention the perceived successes of the Federal Open Market Committee, the former Bundesbank Council, and the ECB Governing Council.

If committees really do outperform individuals, where and how do they acquire their edge? In Blinder (2004, Chapter 2), I suggested five main avenues:

1. A committee pools the knowledge, information, and forecasts of its members, leading to better decisions.
2. Committee members bring different methods of analysis and different ways of processing information (different "decision heuristics") to the table, which benefits the group.
3. Where tradeoffs between conflicting goals are involved (e.g., between inflation and unemployment), committee decisionmaking probably "averages" (not necessarily literally) disparate preferences.
4. For all these reasons, and perhaps others, committees are less likely to adopt extreme positions, Sibert's group-think hypothesis notwithstanding.

[4] Some might claim that the inflationary policies followed by the Federal Reserve before Paul Volcker were an example of harmful group-think. But other central bankers, acting as individuals, were making similar mistakes at the same time. Nor were the attitudes of the pre-Volcker FOMC out of step with contemporary received wisdom.

5. Similarly, policy made by a committee should be less volatile—although this argument is not borne out by the experimental evidence.

Without conceding the point on #4, I am inclined to put the greatest weight on #1 and especially #2. Economists like to think of central bankers as minimizing a *well-defined* (and quadratic) social loss function subject to a *known* (up to stochastic elements) and *stationary* model of the economy. But each of the three italicized words in this sentence is wildly at variance with reality. No one really knows the loss function, and committee members may not agree on it.[5] MPC members certainly do not know—nor think they know—the true model of the economy. Nor, when pressed, would anyone really defend the stationarity assumption. Ill-defined optimization problems with unknown objective functions and unknown (and possibly changing) constraints do not lend themselves to classical optimization techniques, nor to perfect solutions. Instead, they are likely to benefit from the application of different decision heuristics (Hong and Page (2004)).

Having tentatively concluded that committees are (a) different and (b) probably better, I turn in the rest of the paper to issues of committee design. If a nation wishes to exploit the advantages of committees over individuals, what kind of MPC should it create?

2. Types of monetary policy committees

Committees differ along a number of dimensions. In this section, I deal briefly with six: the degree of consensus achieved (or enforced), the strength of the committee's leader, voting procedures (or the absence thereof), the committee's size, its composition

[5] Eliminating the possibility of disagreements over goals is one of the arguments for inflation targeting.

between “insiders” (that is, full-time employees of the bank) and “outsiders,” and how committee members are selected.

Degree of consensus

In a series of papers beginning with Blinder *et al.* (2001), I have suggested the following three-way classification of MPCs. An *individualistic committee* is founded on the principle of individual accountability. It does not insist on achieving consensus when that is difficult, but instead makes decisions by something approximating majority vote. It also often speaks with multiple voices. The Bank of England and the Swedish Riksbank seem to be two examples of this stereotype. By contrast, a *collegial committee* is founded on the principle of group accountability. It strives for, indeed may insist on, a consensus decision that everyone on the committee can embrace; and it may or may not hold a formal vote. Such a committee generally speaks (figuratively, and perhaps literally) with a single voice.

I have further suggested subdividing collegial committees into two types, according to how consensus is achieved. On an *autocratically-collegial* committee, the chairman more or less dictates the consensus, and the other members fall in line. The FOMC under Chairmen Burns, Volcker, and Greenspan (but not Bernanke) were clear examples.[6] The Bank of Norway may be another. (In deference to our hosts, I will let the Bank of Canada classify itself.) On a g*enuinely-collegial* committee, the chairman is less dominant. Members basically agree in advance to reach a group decision, and then they accept the result even if they are not entirely happy with it. The ECB Governing Council is the most prominent contemporary example of this type.

[6] FOMC votes do allow for dissenters. However, dissent is normally rare.

Which system works best? There is probably no single answer that works for all times and places. But I argued in Blinder (2004) that an individualistic committee is probably best suited to exploiting the advantages of committees over individuals—*if* it can solve the "cacophony problem" of speaking with too many (possibly conflicting) voices. Toward that end, it may be wise to throw a dash of collegiality into the mix.

Does strong leadership improve decisionmaking?

In choosing among individualistic, genuinely-collegial, and autocratically-collegial committee structures, one important consideration is how important it is to have a strong leader.[7] Almost by definition, the committee's chair has the most power in an autocratically-collegial committee and the least in an individualistic committee, with genuinely-collegial committees ranging in between. But which arrangement leads to the best performance?

There is no simple answer to this question. I have just suggested, on conceptual grounds, that something between an individualistic and a genuinely-collegial committee structure might be optimal. That blend seems to imply that the chairman does not dominate the proceedings. But even that tentative conclusion could easily be overturned by evidence that an MPC needs strong leadership to function well. Is there such evidence?

It is possible to read the good track records of the Fed under, e.g., Volcker and Greenspan, and of the Bundesbank under, e.g., Poehl and Tietmeyer, as evidence in favor of this proposition. Indeed, the Fed has a longstanding tradition of dominance by its chairman (*c.f.* Blinder (1998) and Meyer (2004)). A number of empirical papers have

[7] Heads of MPCs are variously called chairman (e.g., Fed), governor (e.g., Bank of Canada), or president (e.g., ECB). To economize on words, I'll employ the American usage: *chairman*.

studied the role of the FOMC chairman. We know that Alan Greenspan tended to speak longer in FOMC meetings than the other members (Chappell *et al.*, (2005)), and his domination of the committee was legendary. According to Chappell *et al.* (2004), the impact of Chairman Arthur Burns on policy decisions corresponded to a voting weight of 40-50% of the whole committee. Romer and Romer (2004) argue that even chairmen who were not perceived as particularly able policymakers were influential.

There is much less scholarly research on the role of the chairman in other countries. But it appears that the ECB, during its short history to date, has *not* been nearly as dominated by its presidents as the Fed has; and yet it has performed quite well. And the highly-individualistic, yet highly-successful, Bank of England MPC has even seen its chairman, Mervyn King, on the losing side of votes. So real-world results do not speak to the issue with any clear voice. Gerlach-Kristen (2007) constructs a theoretical model of the role of the chairman on the Bank of England's individualistic MPC. By calibrating this model to fit the interest rates actually set by the MPC, and then simulating it, she concludes that the chairman does not have much impact on the path of the policy rate. Instead, he reduces the disagreement among committee members.

One way in which the committee chair might try to dominate the decisionmaking process is to offer his opinions first (or even to inform other members of his views prior to the formal meeting), thus leaving other committee members the stark choice between going along and dissenting.[8] For example, Chairman Greenspan tended to speak and vote

[8] Meade and Stasavage (2008) construct a model that compares incentives for members of a committee to voice dissent when deliberations occur in public versus in private. They find that the likelihood of having members accurately reveal their private information is greater when deliberation takes place in private. Empirically, they find evidence that FOMC members appear to have voiced less dissent since the committee's decision to publish transcripts.

first at FOMC meetings, but Chairman Bernanke reportedly waits to speak and vote last. But the Fed is just one example. Most of the 31 MPCs surveyed by Maier (2007) do not operate with *any* fixed speaking order at meetings.

One major concern related to group-think is avoiding what are called "information cascades." The term refers to the increasing reluctance to dissent, and the mounting incentives to hide one's private information, as more and more speakers express identical opinions (e.g., agree with the chairman)—which, if it happens, can extinguish information and stifle debate. Committee members want to appear well-informed, and they care about their reputations and careers. Being "wrong" damages both and, in an uncertain world, nobody knows what is really "right." So there is a natural tendency (and an incentive) to "go along to get along." As the cliché says, there's safety in numbers.

To overcome the tendency toward information cascades, some hierarchies and judicial systems operate with explicit anti-seniority rules. The idea is that, if more senior members speak later, more information will be extracted from the junior members, who can express their opinions freely without the disapprobation of more senior experts. But the anti-seniority rule is not always optimal. Ottaviani and Sorensen (2001) prove that there is no optimal speaking order when committee members have similar levels of expertise. They also show that, if there is a large variance in expertise across the committee, speaking in anti-seniority order may actually lead the committee to an inferior decision by incentivizing the most capable member to conceal his own private information.

John Morgan and I (Blinder and Morgan, 2007) recently attacked the leadership issue experimentally. We found, much to our surprise, that ersatz MPCs comprised of

Berkeley students did *not* achieve higher scores when they had designated leaders versus when they did not. Whether this laboratory result applies to real-world MPCs is an open—and important—question which Blinder and Morgan (2007) discuss extensively. But resolving it econometrically seems a daunting (possibly impossible) task.

Voting procedures

Should (and do) MPCs make decisions by holding a formal vote? Making decisions by the unanimity principle versus by majority vote is a hardy perennial topic in the academic literature on group decisionmaking, much of which pertains to either elections or juries. The notion that majority voting is an efficient method way to aggregate information can be traced back all the way to Condorcet (1785). Feddersen and Pesendorfer (1997) confirm the idea by showing that majority voting can achieve full information equivalence in large elections. In a subsequent paper on voting rules in a jury setting, Feddersen and Pesendorfer (1998) show that a unanimity rule leads to a higher probability of acquitting the guilty and convicting the innocent. Both results point toward majority voting. But Coughlan (2000) demonstrates that a unanimity rule can perform as well as any alternative rule in minimizing the probability of error in an environment in which jurors have similar preferences and can communicate effectively with each other. In other words, it is not so much the voting rule *per se* as the atmosphere of deliberation and the composition of the decisionmaking body.

But does one voting rule consistently outperform the other in terms of aggregating information in the specific context of *monetary policy*? In Blinder and Morgan's (2005) experiment, the results of the two voting rules were basically indistinguishable from one another. But they worried that this finding might be a consequence of the low stakes in the

experiment.[9] A theoretical paper by Gerlach-Kristen (2006) argues that voting outperforms averaging if there is uncertainty about the state of the economy—which, of course, there always is.

Yet formal voting on MPCs is less common than might be imagined. In their well-known survey of 94 central banks, Fry *et al.* (2000) found that, of the 79 that make decisions by committee, only 36 do so through formal voting. The other 43 reach decisions by consensus.

If formal votes are held, should the results be disclosed to the public? It may seem that the answer is obviously "yes," but disclosing individual votes might subject MPC members to political pressures, as Gersbach and Hahn (2005) show in a game-theoretic model of the ECB. However, Buiter (1999) argues that non-transparent voting reduces accountability and provides scope for undue influence, and Sibert (2003) finds that delaying the release of votes reduces welfare because it leads to less reputation building. So the theoretical issue seems open, though the burden of proof should rest on those who argue for secrecy.

Committee size

Real world MPCs vary greatly in size, ranging from a low of three members (at the Swiss National Bank) to a high of 21 (the ECB, so far). Table 1 shows the size distribution of monetary policy committees specified by law across a wide range of central banks in several recent years. While the distribution is quite spread out, there appears to be a pretty strong mode in the 7-to-9 member range.

[9] Minority members did not want to hold the group up when unanimity was required.

Table 1
Size Distribution of Central Bank Policy Boards

(1)	(2)	(3)	(4)	(5)
Number of Members	**Percentage of Banks**	**Percentage of Banks**	**Number of Members**	**Percentage of Banks**
3 or fewer	4	11	5 or fewer	23
4-6	28	21	6-10	67
7-9	50	49	11 or more	10
10-12	10	13		
13 or more	8	6		

Source: Columns (1)-(2) come from Lybek and Morris (2004, Table 5), based on a sample of 50 central banks. Columns (1) and (3) come from Erhart and Vasquez-Paz (2007, Chart 1), based on a sample of 85 central banks. Columns (4)-(5) come from Fry *et al*. (2000, Chart 7.4), based on a sample of 82 banks.

What determines optimal—or even actual—MPC size? The answer likely depends on a number of factors, including:

- the committee's composition. If you want different types of people (e.g., economists, bankers, businesspeople, etc.) on the committee, you will need a larger committee.
- the committee's scope. Committees responsible for multiple functions (e.g., bank supervision and regulation, payments systems, etc.) probably need to be larger than committees that only do monetary policy. (More on these two points below.)
- the desired degree of consensus. It is probably easier to achieve consensus on a smaller committee.
- the size of the country. Especially if there is rapid turnover among board members, small countries with large committees may find themselves exhausting the available talent pool.

- the nature of the government that appoints it. For example, the multi-national character of the ECB probably dictates a large committee, as did the dispersed federal structure of the United States in 1913.

A cross-sectional empirical study of *actual* (not necessarily optimal) committee size by Berger *et al.* (2006) found that MPCs tend to have more members in larger and more heterogeneous countries, those with democratic institutions, and those with flexible exchange rates. All this makes sense. Erhart and Vasquez-Paz (2007) also find that larger country size leads to larger MPC size,[10] as does more volatile GDP; but they reverse Berger *et al.*'s finding on the exchange rate regime.

Suppose the advantages of group decisionmaking derive largely from sharing information and employing different heuristics. If information sharing were literally costless and there were no coordination problems, bigger committees would necessarily be better.[11] But the implied enthusiasm for very large committees needs to be tempered by several mitigating factors. Obviously, coordination problems arise in large committees; even the sharing of information and opinions can become cumbersome. As just noted, if consensus is deemed important, very large committees may find that goal elusive. (However, the Fed and the ECB seem to find the task manageable.) And both shirking and group-think may be bigger problems on larger committees.

Blinder and Morgan (2007) tested the performance of four-member versus eight-member committees in an experimental setting, and found only small differences in either strategy or performance. (A slight edge in performance went to the larger committees, though it was generally not statistically significant.) Sibert (2006) suggested, only half

[10] However, the slopes with respect to both GDP and population are very small; it takes 50 million more in population or $1.4 trillion more in GDP to raise MPC size by one just member.
[11] The Condorcet jury theorem, if taken literally, suggests extremely large committees.

tongue-in-cheek, that five-person committees are optimal. If she is right, Table 1 implies that most MPCs are too large. Alternatively, Table 1 can be interpreted as evidence that Sibert is wrong.

Committee membership

What sorts of people should sit on a monetary policy committee? One part of the answer seems to be simple: Since we want central banks to be independent, monetary policy should be made by technocrats, not by politicians. So members of the government should *not* be on the MPC. This dictum is widely accepted these days. Or is it? According to Lybek and Morris (2004), nearly half of the 101 central banks surveyed allow government officials—in most cases, ministers of finance or their representatives—to participate in MPC meetings. But in about half of those cases, the government's representative can vote. Increasingly, however, government officials are explicitly excluded from becoming MPC members, as a way to guarantee central bank autonomy. The recent brouhaha over the appointment of a new governor of the Bank of Japan was a stunning case in point. So I think it is safe to declare the exclusion of finance or treasury representatives from the MPC as part of "best practice"—even though it is not always followed.

But beyond that, what else can we say? Some of my fellow economists seem to believe the answer is simple. Contrary to the old adage that war is too important to be left to the generals, they believe that monetary policy should be made by a bunch of skilled, technical economists who know how to minimize the expected value of a quadratic loss function subject to a linear, stochastic model—people like Ben Bernanke, Mervyn King, Stanley Fischer, and Lars Svensson, to name a few stellar examples. I hate to dissent

from this self-satisfied view, and in some sense I don't. And besides, the real-world trend does appear to be moving in that direction.[12] But before we macroeconomists become too smug, let me point out two things.

Conceptually, if you believe that the main benefits from having decisions made by a committee (rather than by an individual) derive from different ways of thinking, then having only Ph.D. macroeconomists on the MPC may not be the best recipe. Empirically, think of the leadership of the Fed as an example. Concentrating on accomplished research economists would have eliminated both Paul Volcker, who was a government official for many years, and Alan Greenspan, who was a business economist with tight political connections, from consideration while accepting the distinguished academic Arthur Burns. So, happy as I am to see my brilliant friend Ben Bernanke at the helm of the Fed, I don't necessarily believe that publishing a lot of notable scholarly work on monetary economics is the best possible credential for a central banker.

Neither, of course, did the founders of the Federal Reserve, which has the world's oldest central bank committee. The Federal Reserve Act (1913) directs the President of the United States to appoint the seven-person Board of Governors in Washington with "due regard to a fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country"—which doesn't sound much like a description of the NBER macro group. Appointments of the 12 district bank presidents are even more complicated since each is chosen (with the approval of the Board of Governors) by the bank's board of directors: a nine-person body comprised of

[12] When President Bill Clinton appointed me as Vice Chairman of the Fed in 1994, I believe I was only about the fourth or fifth career academic (depending on how you define that term) to be appointed to the board in its 80 year history. Since then, there have been seven more academics out of 12 new appointments. This looks like a regime change to me.

three directors "chosen by and representative of the stockholding banks," three directors "designated by the Board of Governors… with due but not exclusive consideration to the interests of agriculture, commerce, industry, services, labor and consumers," and three members "who shall represent the public" and are to be chosen with those same interest groups in mind. Whew!

In short, the founders of the Fed sought to entrust its decisions (no one in 1913 called it "monetary policy") to "men of affairs" (no one was thinking of women then) with a broad variety of life experiences and points of view. The Maastricht Treaty, which came almost 80 years later, placed more faith in the virtues of specialists. It specified that ECB Executive Board members should be "persons of recognized standing and professional experience in monetary or banking matters," which still does not require trained economists.

In thinking about the choice between technical monetary economists and others, it is worth remembering that members of the Fed's Open Market Committee and the ECB's Governing Council have duties other than monetary policy to perform. And specialists in monetary economics probably have no particular comparative advantage in, say, bank supervision or running a bank or a government bureaucracy. Nor are the Fed and the ECB unusual in this respect. Giving central bankers multiple roles is the norm, not the exception.[13] My own experience on the Federal Reserve Board taught me that it is useful to have colleagues with more experience in banking, and in financial business in general, than academics normally have—even if these colleagues don't understand linear-quadratic models. Indeed, it seems axiomatic that the composition of a committee should depend on the tasks it is assigned to perform. There is little systematic evidence on how

[13] The Bank of England's MPC seems to be the most prominent exception.

the scope of a central bank board's responsibilities varies across the globe, but we know that it does vary.

The fact that most central banks perform a variety of tasks raises a related question: Should all members of the MPC be officers of the bank ("insiders"), or is it better to have some "outsiders" who have specialized knowledge of, e.g., monetary policy? Practices vary. The British MPC is explicitly divided into five internal and four external members. At the Fed, all 19 FOMC members are "insiders," as long as you count the 12 district bank presidents that way (as you should).[14] The ECB's insider-outsider structure is harder to characterize. The six-member Executive Board works at headquarters in Frankfurt, but they are not ECB careerists. The other members of the Governing Council are the heads of the 15 (and growing) constituent national central banks—a mix of careerists (but at their own institutions) and non-careerists.

Which mix works best? I find this a hard question to answer. On the one hand, real benefits—such as the avoidance of group-think—accrue from bringing fresh, diverse points of view into the committee room. That observation suggests including some outsiders who are less invested in the bank's party line; and indeed, outsiders do dissent more frequently than insiders on the British MPC.[15] On the other hand, I find it hard to see how a *part-time* outsider, who is still pursuing some other occupation, can be fully insulated from what might be called incidental conflicts of interest (e.g., everyone is affected by interest rates) and/or from making news inadvertently while outside the

[14] In fact, a number of the presidents are typically Fed careerists, whereas relatively few governors in Washington are. In recent decades, the only one has been Donald Kohn.
[15] See, among others, Gerlach-Kristen (2007). At the Fed, district bank presidents also dissent more frequently than governors. See Meade and Sheets (2005).

cocoon of the central bank. So if there are to be "outsiders" on an MPC, I believe they should be full-time public servants, which is the Fed model.[16]

Looking empirically at the composition of actual MPCs doesn't help much. Not only do the membership ranks include academics, career central bankers, representatives of the banking/business community, and representatives of ministries, but sometimes these lines are hard to draw. According to a recent survey of 31 MPCs by Maier (2007), 17 of them have only career central bankers whereas 14 have both internal and external members. Looking at some prominent central banks, the Bank of England's MPC has a diverse (internal plus external) membership comprised of academics, business representatives, and career central bankers, whereas Maier classifies—incorrectly, I would say—the FOMC and the Bank of Japan's MPC as being made up solely of central bankers. While the members of the ECB Governing Council come from different nations, they are mostly career central bankers.

Appointment procedures

Appointment and removal procedures are relevant to the considerations just discussed (what sorts of people should be on MPCs?), and also to the delicate balance between ensuring central bank independence, on the one hand, and enhancing democratic accountability and legitimacy, on the other. The former suggests that appointments to monetary policy committees should be made by the politically-responsible authorities, which could mean either the president or prime minister (or, as in the British case, his agent) or the legislature or parliament, depending on how a country is governed. But it does rule out self-perpetuating oligarchies.

[16] Making all members full-timers, incidentally, probably implies giving them others tasks to perform because thinking about monetary policy is probably not a full-time job—as long as the central bank has ample staff resources.

Central bank independence also points to long terms of office as one way to shield monetary policy from political pressures. In their survey of 101 central banks, Lybek and Morris (2004) found that 66% have fixed terms of four years or more. In one extreme case, governors of the US Federal Reserve Board have fourteen-year terms. Almost no Fed governors, however, actually serve a full term. ECB Executive Board terms run eight years but, at least so far, most members serve their terms out.[17]

Table 2, which is based on Moutot *et al.* (2008), shows an international comparison of the appointments and terms of office of MPC members at eight rich-country central banks. The long terms are evident, while renewability varies.

Table 2
Appointment of MPC members at selected central banks

Central Bank	**Eurosystem (Governing Council)**	**Norges Bank (Executive Board)**	**Sveriges Riksbank (Executive Board)**	**Swiss National Bank (Governing Board)**	**Bank of England (MPC)**	**Bank of Australia Reserve (Bank Board)**	**Bank of Japan (Policy Board)**	**Federal Reserve System (FOMC)**
Appointed by	Head of State or Government	The King	General Council	Federal Council	The Chancellor	The Treasurer	The Cabinet	The President
Terms of Office	8 years, non-renewable for EB members, minimum 5 years for NCB, renewable	6 years for full time members, 4 years for other members Renewable	6 years, non-renewable	6 years, renewable	Fixed term up to 5 years, renewable	7 years for full time members, 5 years for other members, renewable	5 years, renewable	14 years, non-renewable or unexpired term, renewable up to 14 years

Source: Moutot et al (2008)

As important as central bank independence is, it cannot be absolute in a democracy. There should, for example, be some ultimate political check on the authority of the central bank—for example, by giving the elected government the ability to fire MPC members or to take back some of the central bank's power under extreme

[17] However, because of the staggered terms granted at the outset, only Otmar Issing has actually served eight years.

circumstances.[18] But since this "nuclear option" will rarely, if ever, be invoked, it seems wise to have some milder way to mitigate the "democracy deficit." Giving the power to appoint central bank officials to politicians who must stand for election seems a good option.

Different countries have apparently balanced these considerations in different ways. As mentioned earlier, seven members of the FOMC are politically appointed by the President of the United States (with Senate confirmation) to terms that are 14 years long *de jure* but much shorter *de facto*. But the other twelve FOMC members are not political appointees. Similarly, six members of the ECB's Governing Council are appointed "by common accord" of the heads of government for eight-year terms, while the other 15 are appointed by national authorities—in a variety of ways and for terms of different length.

Staggering of terms is sometimes adopted to ensure the institutional continuity of monetary policy making, to reduce the level of politicization, and perhaps even to reduce the tendency toward group-think by regularly introducing new members. Using a game-theoretic approach, Tabellini (1987) first showed that staggered terms can provide reputational incentives so that a finitely-lived committee with overlapping terms can operate as if there will never be a "last period." Waller (1992) later rationalized staggering as a way to reduce political swings from dovishness to hawkishness as a result of elections. Despite these arguments, and despite the prominent examples of the ECB and the Fed, staggering has *not* been adopted by the majority of MPCs. Among the central banks surveyed by Lybek and Morris, for example, only about 20% use *de jure*

[18] On this, see Lohmann (1992). In the US case, extreme circumstances are not even required. The Congress can end the Federal Reserve's independence any day it chooses.

staggered terms. However, occasional vacancies and renewability of terms create some *de facto* staggering.

3. Committees and communication

In a recent paper (Blinder, 2007), I made a fairly obvious point that seems not to have been made before: Because monetary policy committees are so different, they probably need to communicate in different ways. In particular, central banks with individual decisionmakers, autocratically-collegial committees, genuinely-collegial committees, and individualistic committees probably each need different styles of communication. A few examples will illustrate why.[19]

Start with the *statement* released immediately following a monetary policy meeting and the subsequent release of the *minutes.* I pair the two because, in a real sense, they are substitutes. An autocratically-collegial committee should be able to deliver a detailed and coherent explanation of its action *immediately*. After all, the chairman almost certainly knows the outcome before the meeting starts. If the statement is sufficiently long and detailed, there is little need for detailed minutes and no rush to produce them. The minutes will not contain much market-relevant information, anyway.

But things may be quite different at the end of a meeting of a genuinely-collegial committee. First, the chairman may not know the outcome of the meeting in advance, which clearly prevents him from drafting an explanatory statement beforehand. And drafting a detailed statement *by committee* in *real time* is quite a challenge. Second, while committee members may all agree on the decision, they may disagree over the reasoning

[19] For more details, see Blinder (2007, pp. 116-120).

behind it.[20] If so, issuing a detailed statement right after the meeting might be quite difficult, leaving a terse statement as the only viable alternative. In such cases, the minutes assume greater importance and need to be released sooner and to be more detailed.

The immediate communication problem is even more acute for an individualistic committee, whose decisions are apt to be non-unanimous. And even if everyone votes the same way, members are likely to disagree over the rationales. In a situation like that, agreeing on an immediate explanatory statement may prove to be impossible. In the absence of such a statement, the entire burden of explanation falls on the minutes, which must therefore be quite detailed and should be released as soon as possible.

A second pertinent example is the disclosure of forward-looking information, up to and including a projection of future central bank decisions—which the central banks of New Zealand, Norway, Sweden, and Iceland now publish. In principle, this task is far easier for an individual central banker acting alone, or for an autocratically-collegial committee, than for either of the other two types. The chairman of an autocratically-collegial committee presumably has a good idea of what he is likely to do in the future, and he can reveal information about it if he so chooses. Late in his tenure as Fed chairman, Alan Greenspan did this regularly, albeit in a highly stylized way.

But the chairman of a genuinely-collegial committee holds a less commanding position. When decisions are difficult, he may not be able to predict where the committee will go, nor when. And other committee members almost certainly will not want him to foreclose their options. Since no central bank can be expected to reveal what it does not

[20] Indeed, the honest rationale for some members might be "because everyone else wanted to."

know, such a committee may be limited to vague indications of its "bias" or perceived "balance of risks," which is what the ECB and the Fed typically offer.

Revealing forward-looking information is, of course, most difficult for an individualistic committee, where members not only *may* but probably *do* hold different views on where monetary policy should be heading—some of which they may make public. If no agreement on future plans can be reached, then nothing can be revealed. On the other hand, the votes of an individualistic committee may be much more informative about future intentions than are the votes of collegial committees. Votes should therefore be published immediately, naming names.

The size of the committee may also affect an MPC's communication strategy. While the difficulties are often exaggerated, it *is* harder for a larger group to agree on wording. Indeed, this appears to be a severe practical problem right now for the FOMC, which issues a brief statement after each meeting. Even though these statements are terse and stylized, committee members reportedly have a hard time agreeing on the wording—leading to the exchange of numerous drafts. And the words sometimes leave people puzzled anyway. It may be that issuing, say, a coherent 500-word explanatory statement is literally beyond the FOMCs current capabilities.

If this conundrum is genuine, it raises a delicate chicken-egg issue. I have emphasized that the decision on committee size may dictate some aspects of the communication policies. But if a monetary policy committee is so large that it cannot communicate clearly, effectively, and honestly, maybe it is too large.

4. Whose forecasts?

One specific type of information that most central banks release, at least occasionally and partially, are forecasts of key macroeconomic variables such as inflation, unemployment, and output (or even output gaps). Public inflation forecasts are particularly important under inflation targeting. But regardless of the central bank's target(s), forecasts of the outlook *under both changed and unchanged monetary policy* are among the most crucial inputs to monetary policy decisions, whether made by an individual or a committee,. So transparency seems to dictate that central banks release (at least portions of) those forecasts.

That said, committee decisionmaking raises some specific and vexing issues. For starters, whose forecast should be released? A first distinction is between forecasts of the committee, if they exist, and forecasts of the central bank staff. To the extent that the two differ, the former are presumably more tightly linked to policy decisions than the latter. So let's start there.

In what sense can a committee, especially a large committee like the FOMC or the ECB Governing Council, actually be said to make a numerical forecast, especially a detailed one? That is a good question, and the answer is related to some of the issues raised earlier, such as how large the MPC should be and what sorts of people should be on it.

At the technical level, macroeconomic forecasts are almost always generated by teams. So a relatively small MPC comprised of technically-minded economists should be able to develop a forecast which it collectively "owns." In such cases, the MPCs forecast is surely the right one to release. But if the committee is large and/or if its members lack

expertise in macroeconomics and forecasting, agreement on the forecast can become either elusive or illusory—perhaps both.

Current FOMC forecasts, which are now released four times a year, are a good example. The published committee forecasts present the range and *central tendency* (which means excluding the three highest and three lowest) of the forecasts submitted by each of the 19 FOMC members. But members never meet (nor even email) to try to iron out (or even understand) the differences among their forecasts. Instead, they each generate forecasts under their own favorite (and often unstated) assumptions about exogenous variables such as oil prices, government spending, and foreign economic growth. They even make their own assumptions about future monetary policy! And while the district bank presidents each have large staffs to do the forecasting work, the governors in Washington (other than the chairman) do not. The resulting "projections" are thus a curious hodge-podge which is hard to interpret—although showing the entire distribution (as the FOMC now does) helps a bit.

Could the forecast exercise be done better? I am sure the answer is yes. But the fact remains that a 19-member committee will find it hard to agree on a long list of numbers, even if most of them are Ph.D. economists, as is true on the FOMC today. If you add a bunch of people who carry dramatically different intellectual baggage into the room, agreement may become even more elusive. In such cases, the staff forecast might be a sensible focal point.

5. A Summing Up

It seems probable that more thinking has gone into the question of what a monetary policy committee should look like over the last decade than over the preceding century. While we have not yet reached agreement on *everything*, and may never do so, one way to sum up this talk is to ask what might be considered "best practice" right now. If you were a country currently thinking about redesigning your monetary policy apparatus, what sort of monetary policy committee would you set up? Posing this question is probably also a good way to provoke my discussants into disagreements.

To begin with the most obvious point, I think you would choose to have a MPC rather than a single policymaker. The weight of both theory and evidence—plus, of course, international practice—points strongly in that direction. The optimal size for your MPC is less clear. While 7-9 members seems to be the most popular choice around the world, a small country might find it challenging to staff a committee of, say, nine, especially if turnover is rapid.[21] You also should not make the committee so large that it finds it difficult to communicate clearly and in some detail. As mentioned, your communication strategy—including the type of forecast you publish—needs to be custom-tailored to the nature and structure of your committee.

In terms of committee type, I believe you would try to strike a balance between the virtues of diversity that are the hallmark of an *individualistic* committee and the clarity of communication that is the virtue of a *genuinely-collegial* committee—that is, wind up somewhere between the Bank of England and the ECB. The virtues of diversity suggest that not all members need to be specialists in monetary economics. The virtues of

[21] The UK, which is not a small country, has had foreign nationals and foreign residents on its MPC.

collegiality, plus the research I have mentioned, suggest that it is not essential to have a dominant chairman.

All committee members should be appointed by the government, although *precisely* what that means must depend on the details of the country's system of governance. If the legal arrangements imply individual accountability, then voting records should be in the public domain. But if the MPC has group accountability *only*, then there is a case for withholding that information.

I also believe that every MPC member should be a full-time employee of the central bank—which is certainly the international norm. However, it may be best—as a safeguard against group-think—if bank careerists constitute only a minority of the committee's membership. A committee comprised of a healthy blend of monetary policy specialists (the majority) and a few others is probably advisable in most cases.[22]

Many of you may now be comparing your own country's practices to this abstract standard of "best practice." In the case of the United States, the comparison looks pretty favorable to the FOMC, but with four exceptions. First, the Fed chairman may have been too dominant, and the rest of the committee too passive, historically. Interestingly, Ben Bernanke seems to have changed that. Second, a 19-member committee is probably too large. Third, only a minority of the FOMC membership is politically appointed. And fourth, the Fed does not communicate often or clearly enough.

It need hardly be said that each of these judgments on what constitutes best practice is tentative, based partly on the research to date and partly on experience. Further research may temper or even overturn some of them. And more research is certainly needed.

[22] The main exception would be if monetary policy is the committee's sole responsibility.

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